

NOVEMBER/DECEMBER 2025

**FEL51/CEL51 — MICROPROCESSOR AND
ITS APPLICATION**

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks).

Answer ALL questions.

1. What is timing and control unit?
2. What is flag?
3. What is stack?
4. What operation is performed for XRA instruction?
5. What are the types of semiconductor memories?
6. What is fetch cycle?
7. What is control word?
8. What is Trap?
9. What is the I/O address of the internal device of 8279.
10. Explain traffic lights controller.

SECTION B — ($5 \times 5 = 25$ marks)

Answer ALL questions.

11. (a) What are the Registers in 8085 microprocessor? Explain them briefly.

Or

- (b) Explain the instruction set of 8085.

12. (a) Write an assembly language program for transferring block of data from one section of memory to another.

Or

- (b) Explain the method to calculate delay time.

13. (a) Draw and explain the timing diagram for memory write operation.

Or

- (b) Explain what is port mapped I/O Scheme.

14. (a) Sketch the functional block diagram of 8279.

Or

- (b) What are the features of 8279?

15. (a) Explain the microprocessor based scheme for Stepper motor interface.

Or

- (b) Write an assembly language program for analog to digital conversion.

SECTION C — ($3 \times 10 = 30$ marks)

Answer any THREE questions.

16. Describe the Addressing modes of 8085 microprocessor.
17. Discuss PUSH and POP operation.
18. Explain instruction cycle and machine cycle.
19. Sketch the seven segment display interfacing.
20. Discuss the different modes of operation of Intel 8253/54.

